

IN THE UNITED STATES DESIGNATED OFFICE (DO/US)

In re: David Leedham et al.  
Serial No.: To Be Assigned  
Filed: Concurrently Herewith  
For: *IMPROVEMENTS RELATING TO IMAGE PROCESSING*

Date: July 20, 2001

Commissioner for Patents  
Washington, DC 20231

**Correspondence Address:**



20792

PATENT TRADEMARK OFFICE

**PRELIMINARY AMENDMENT**

Dear Sirs:

Please amend the above-identified application as follows. Please enter the Preliminary Amendment prior to the fee calculation:

**IN THE SPECIFICATION**

Please insert the following paragraph at page 1 after the title:

**--Related Applications**

This application claims priority from the following UK Applications: GB 0019297.1, filed 7 August 2000 GB 0027021.5, filed 3 November 2000; GB 0103453.7, filed 13 February 2001; GB 0110197.1, filed 26 April 2001; and GB 0113743.9, filed 6 June 2001. This application also claims priority from U.S. Provisional Application No. 60/255,461, filed 13 December 2000, and from U.S. Provisional Application No. 60/288,592, filed 31 May 2001. These disclosures are hereby incorporated by reference herein in their entirety.--

At page 1, line 2, please insert the heading:

**--Field of the Invention--**

At page 1, line 9, please insert the heading:

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**--Background of the Invention--**

At page 4, line 3, please insert the following heading:

**--Summary of the Invention--**

At page 11, line 19, please insert the following heading:

**--Brief Description of the Drawings--**

At page 12, line 3, please insert the following heading:

**--Detailed Description of the Invention--**

**IN THE CLAIMS:**

Please delete Claims 25-27.

Please amend the claims to the following form (a version of these claims that shows changes thereto is attached as an appendix entitled "Version Marked to Indicate Changes"):

3. (Amended) A method according to claim 1, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

4. (Amended) A method according to claim 1, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

6. (Amended) A method according to claim 1, wherein the second and third digital images are displayed together on a visual display unit.

7. (Amended) A method according to claim 1, wherein the second and third digital images are displayed together on a colour printout.

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8. (Amended) A method according to claim 1, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

11. (Amended) A system as claimed in claim 9, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

12. (Amended) A system as claimed in claim 9, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

14. (Amended) A system as claimed in claim 9, wherein the second and third digital images are displayed together on a visual display unit.

15. (Amended) A system as claimed in claim 9, wherein the second and third digital images are displayed together on a colour printout.

16. (Amended) A system as claimed in claim 9, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

19. (Amended) A product as claimed in claim 17, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

20. (Amended) A product as claimed in claim 17, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the

second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

22. (Amended) A product as claimed in claim 17, wherein the second and third digital images are displayed together on a visual display unit.

23. (Amended) A product as claimed in claim 17, wherein the second and third digital images are displayed together on a colour printout.

24. (Amended) A product as claimed in claim 17, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

REMARKS

Applicant respectfully requests consideration of the foregoing amendments. The amendments made herein eliminate the multiple dependency of each claim, to add headings preferred in U.S. practice, and to claim priority from pending domestic and foreign applications. Please enter this amendment prior to calculating the fee in this case.

Respectfully submitted,

  
James R. Cannon  
Registration No. 35,839

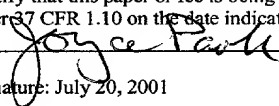
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Date of Signature: July 20, 2001

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**Version Marked to Indicate Changes**

3. (Amended) A method according to claim 1 **[or 2]**, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

4. (Amended) A method according to **[any preceding claim] claim 1**, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

6. (Amended) A method according to **[any preceding claim] claim 1**, wherein the second and third digital images are displayed together on a visual display unit.

7. (Amended) A method according to **[any preceding claim] claim 1**, wherein the second and third digital images are displayed together on a colour printout.

8. (Amended) A method according to **[any preceding claim] claim 1**, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

11. (Amended) A system as claimed in claim 9 **[or 10]**, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

12. (Amended) A system as claimed in **[any one of claims 9 to 11] claim 9**, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

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14. (Amended) A system as claimed in **[any one of claims 9 to 13]** **claim 9**, wherein the second and third digital images are displayed together on a visual display unit.

15. (Amended) A system as claimed in **[any one of claims 9 to 14]** **claim 9**, wherein the second and third digital images are displayed together on a colour printout.

16. (Amended) A system as claimed in **[any one of claims 9 to 15]** **claim 9**, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

19. (Amended) A product as claimed in claim 17 **[or 18]**, wherein the predetermined algorithm in step (v) is an octree quantisation algorithm.

20. (Amended) A product as claimed in **[any one of claims 17 or 19]** **claim 17**, wherein the third digital image in step (vi) is generated by determining a range key value for each pixel in the second digital image and then representing this range key value at corresponding pixels in the third digital image with mutually distinguishable colour attributes on a pixel-by-pixel basis.

22. (Amended) A product as claimed in **[any one of claims 17 to 21]** **claim 17**, wherein the second and third digital images are displayed together on a visual display unit.

23. (Amended) A product as claimed in **[any one of claims 17 to 22]** **claim 17**, wherein the second and third digital images are displayed together on a colour printout.

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24. (Amended) A product as claimed in [any one of claims 17 to 23] claim 17, wherein the article is a tooth, the database is a database of ceramics colours or the like used for manufacturing dental prostheses, and the third digital image is a template for manufacturing a dental prosthesis.

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